

The Commonwealth of Massachusetts  
Executive Office of Health and Human Services  
Department of Public Health  
William A. Hinton State Laboratory Institute  
305 South Street, Jamaica Plain, MA 02130

DEVAL L. PATRICK  
GOVERNOR

TIMOTHY P. MURRAY  
LIEUTENANT GOVERNOR

JUDYANN BIGBY, MD  
SECRETARY

JOHN AUERBACH  
COMMISSIONER

12/09/2011

Ryan Mingo  
Assistant District Attorney, Suffolk County

Dear ADA Mingo,

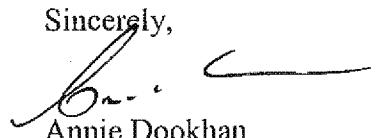
Enclosed is the information you requested in regards to Commonwealth vs. [REDACTED]. Included are copies of the following:

1. Curriculum Vitae for Annie Dookhan and Peter Piro.
2. Drug Analysis Laboratory Receipt.
3. Control Cards with analytical results for samples # [REDACTED]
4. Analysis sheets with custodial chemist's hand notations and test results.
5. GC/Mass Spectral analytical data for samples # [REDACTED]

Ann Dookhan was the custodial chemist and performed the preliminary testing and net weight for this sample. Peter Piro was analyzed the GC/MS data for this sample.

If you have any questions about these materials, please call me at the number below.

Sincerely,

  
Annie Dookhan  
Chemist  
Drug Analysis Lab  
Jamaica Plain, MA. 02130  
(617) 983-6622

## Curriculum Vitae

### **Annie Khan (Dookhan)**

#### **Education:**

University of Massachusetts, Boston, Ma, Master of Science in Chemistry.

University of Massachusetts, Boston, Ma, Bachelor of Science in Biochemistry.

#### **Experience:**

2003 – present

Chemist I, II, Massachusetts Department of Public Health, Drug Analysis Laboratory

\*Responsible for the identification of illicit drugs to determine violations of harmful and narcotic drug laws.

\*Writing, revising and reviewing Standard Operating Procedures (SOPs) and Protocols.

\*Responsible for the Quality Control of all analytical instruments, reagents and controls/standards.

\*Oversee the Quality Control/Quality Assurance program for the Drug Lab.

\*Maintenance and repairs of all analytical instruments.

\*Trained in the use of complex analytical instrumentation, microscopes and balances for the purpose of drug analysis.

\*Qualified as an expert witness in Massachusetts Courts and U.S. District Court.

\*Completed six-week training course conducted by senior staff within the Department of Public Health, Drug Analysis Laboratory.

\*Appointed Assistant Analyst by Assistant Commissioner of Public Health, 2004.

\*Notary Public.

2001 – 2003

QC Analyst I, II, UMMS-Massachusetts Biologic Laboratory, QC Material Control

\*Completed proficiency training conducted by a member of the staff within the MLB Quality Control and Quality Assurance Department for the Food and Drug Administration.

\*Method Development for creating new techniques and enhancing vaccines for the QC Dept. and FDA.

\*Writing, revising and reviewing Standard Operating Procedures (SOPs).

\*Trained and supervised new chemists and interns for the department.

\*Routine QC testing of products for the FDA.

\*Trained in the use of complex analytical instrumentation, and balances for the purpose of QC analysis for product and validation projects.

\*Calibration, preventive maintenance, QC and QA of analytical instrumentation.

\*Complete testing of chemicals for Vendor Validation Project for the FDA.

\*Compendial testing and interpretation of the USP, ACS, FCC, AOAC, Merck Index, PDR, etc.

#### **Additional Training:**

Dept. of Justice – Forensics Professionals. (numerous trainings)

GLP/GMP training with Massachusetts Biologic Laboratory.

QC/QA training according to FDA Codes and Regulations.

GC and GC/MS trainings with Agilent Technologies and Restek.

HPLC and LC/MS/MS trainings with Waters Cooperation.

FTIR training with Spectros.

TOC training with MBL and Sievers.

#### **Association:**

American Chemical Society (ACS)

Northeastern Association of Forensics Science (NEAFS)

Curriculum Vitae

Peter Piro

EDUCATION

Boston University

B.A. in Chemistry and Minor in Biology, 1989

HONORS

Magna Cum Laude, 3.6 GPA

Graduated with Distinction in Chemistry

Valedictorian of the Chemistry Department

EXPERIENCE

Department of Public Health/State Laboratory Institute

Chemist III, II, I/ Assistant Analyst December 1991-Present

Supervise the operation and maintenance of the Gas Chromatography/Mass Spectrometry Laboratory. Analyze controlled substances for State and Federal law enforcement agencies. Qualified as an expert witness in Massachusetts courts and U.S. District Court.

Massachusetts Health Research Institute

Laboratory Technician September 1990-December 1991

Researched the seasonal and special occurrences of DSP and PSP in shellfish samples harvested from coastal waters and Georges Bank.

TRAINING AND ORGANIZATIONS

\* Completed a six-week training course by senior staff within the Department of Public Health Drug Analysis laboratory.

\* Appointed Assistant Analyst by the Assistant Commissioner of Public Health in February 1991.

\* Elected as a Regular Member to the Northeastern Association of Forensic Chemists on October 27<sup>th</sup> 1995.

\* Completed training in Mass Spectrometry given by the Food and Drug Administration/Forensic Chemistry Center on November 2002.

\* Completed training in Mass Spectrometry Troubleshooting and Maintenance, October 25<sup>th</sup> 2002, at Agilent Technologies.

\* Notary Public since 1993.



## **DRUG RECEIPT**

CC # \_\_\_\_\_  
BOOK # 64  
PAGE # 54  
DESTRUCTION # \_\_\_\_\_

District/Unit A-1 DCU

Name & Rank of Arresting Officer S/S Wm DWAN ID# 10066

**To be completed by ECU personnel only**

Name and Rank of Submitting Officer John J. Murphy ID# 9370

Received by \_\_\_\_\_ Date \_\_\_\_\_

## ECU Control #

No. [REDACTED]

Date Analyzed:

3-21-11

City: Boston D.C.U. Police Dept.

Officer: P.O. Diana Lopez

Def: [REDACTED]

Amount:

Subst: SUB

No. Cont: 1 Cont: pb

Date Rec'd: 03/09/2011

No. Analyzed:

Gross Wt.: 1.66

Net Weight: 0.14

# Tests: 6<sup>92</sup>  
2 P.P.<sup>12</sup>

Prelim: COCAINE (C)

Findings: COCAINE

No. [REDACTED]

Date Analyzed:

3-21-11

City: Boston D.C.U. Police Dept.

Officer: P.O. Diana Lopez

Def: [REDACTED]

Amount:

Subst: SUB

No. Cont: 1 Cont: pb

Date Rec'd: 03/09/2011

No. Analyzed:

Gross Wt.: 2.04

Net Weight: 0.09

# Tests: 6<sup>92</sup>  
2 P.P.<sup>10</sup>

Prelim: COCAINE (C)

Findings: COCAINE

No. [REDACTED]

Date Analyzed:

3-21-11

City: Boston D.C.U. Police Dept.

Officer: P.O. Diana Lopez

Def: [REDACTED]

Amount:

Subst: SUB

No. Cont: 1 Cont: pb

Date Rec'd: 03/09/2011

No. Analyzed:

Gross Wt.: 1.63

Net Weight: 0.09

# Tests: 6<sup>92</sup>  
2 P.P.<sup>11</sup>

Prelim: COCAINE (C)

Findings: COCAINE

# DRUG POWDER ANALYSIS FORM

SAMPLE # [REDACTED] AGENCY Boston ANALYST ADJ

No. of samples tested: \_\_\_\_\_ Evidence Wt. \_\_\_\_\_

PHYSICAL DESCRIPTION: Gross Wt ( ): 0.2052

Off white powdered substance Gross Wt ( ): \_\_\_\_\_

17 18b

Pkg. Wt: \_\_\_\_\_

Net Wt: 0.16145

## PRELIMINARY TESTS

### Spot Tests

Cobalt  
Thiocyanate (-) +

Marquis -

Froehde's -

Mecke's -

### Microcrystalline Tests

Gold  
Chloride +

TLTA (-) +

### OTHER TESTS

## PRELIMINARY TEST RESULTS

RESULTS cocaine

DATE 3-18-11

## GC/MS CONFIRMATORY TEST

RESULTS cocaine

MS OPERATOR RJD

DATE 3-21-11

# DRUG POWDER ANALYSIS FORM

SAMPLE # [REDACTED] AGENCY Boston ANALYST ADD

No. of samples tested: \_\_\_\_\_ Evidence Wt: \_\_\_\_\_

PHYSICAL DESCRIPTION: Gross Wt ( ): 0.1163

Off white crumbly substance Gross Wt ( ): \_\_\_\_\_

17.95

Pkg. Wt: \_\_\_\_\_

Net Wt: 0.0993

## PRELIMINARY TESTS

### Spot Tests

Cobalt  
Thiocyanate (-) +

Marquis \_\_\_\_\_

Froehde's \_\_\_\_\_

Mecke's \_\_\_\_\_

### Microcrystalline Tests

Gold  
Chloride +

TLTA (-) +

## OTHER TESTS

## PRELIMINARY TEST RESULTS

RESULTS COCCINE

DATE 3-18-11

## GC/MS CONFIRMATORY TEST

RESULTS COCAINE

MS  
OPERATOR PJP

DATE 3-21-11

# DRUG POWDER ANALYSIS FORM

SAMPLE # [REDACTED] AGENCY Boston ANALYST ASN

No. of samples tested: \_\_\_\_\_ Evidence Wt. \_\_\_\_\_

PHYSICAL DESCRIPTION: Gross Wt ( ): 0.1314

off white chunky residue  
11-85

Gross Wt ( ): \_\_\_\_\_

Pkg. Wt: \_\_\_\_\_

Net Wt: 0.0955

## PRELIMINARY TESTS

### Spot Tests

Cobalt  
Thiocyanate (-) +

Marquis -

Froehde's -

Mecke's -

### Microcrystalline Tests

Gold  
Chloride +

TLTA (-) +

### OTHER TESTS

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## PRELIMINARY TEST RESULTS

RESULTS cocaine

DATE 3-18-11

## GC/MS CONFIRMATORY TEST

RESULTS cocaine

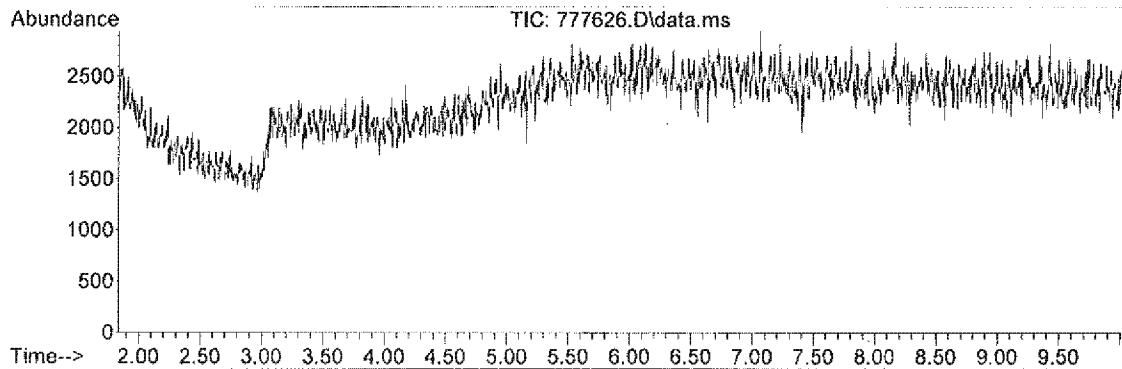
MS OPERATOR PJR

DATE 3-21-11

✓ P.P.:r  
12-9-11

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Date Acquired : 19 Mar 2011 19:45  
Sample Name : BLANK  
Submitted by : ASD  
Vial Number : 1  
AcquisitionMeth: DRUGS.M  
Integrator : RTE



| Ret. Time | Area | Area % | Ratio % |
|-----------|------|--------|---------|
|-----------|------|--------|---------|

\*\*\*NO INTEGRATED PEAKS\*\*\*

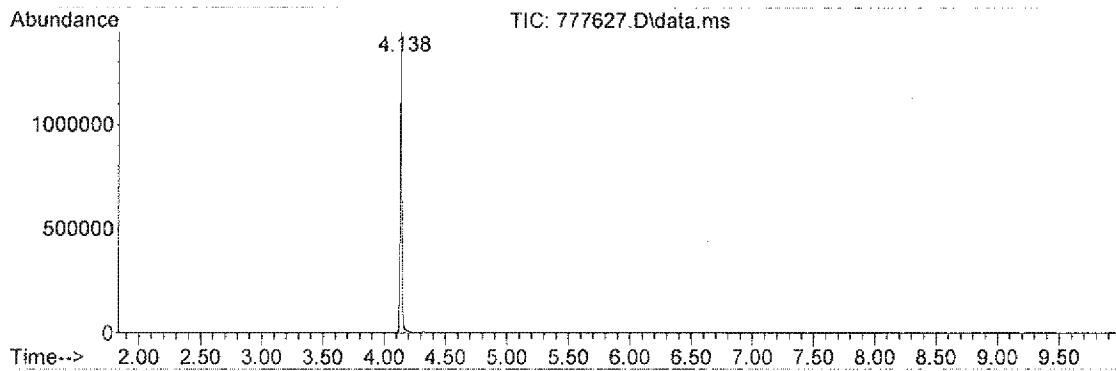
Area Percent / Library Search Report

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Information from Data File:

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Operator : ASD  
Date Acquired : 19 Mar 2011 19:58  
Sample Name : COCAINE STD  
Submitted by : ASD  
Vial Number : 27  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

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| Ret. Time | Area    | Area % | Ratio % |
|-----------|---------|--------|---------|
| 4.138     | 1353311 | 100.00 | 100.00  |

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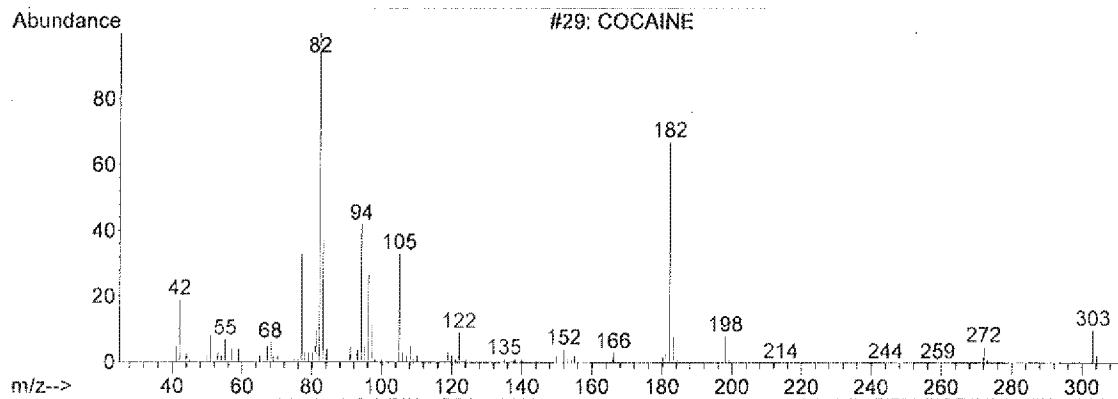
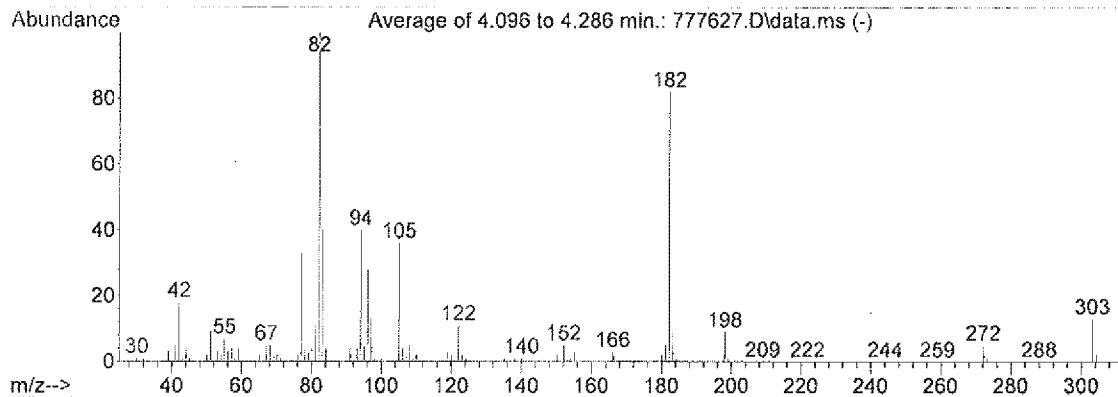
Area Percent / Library Search Report

Information from Data File:

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Operator : ASD  
Date Acquired : 19 Mar 2011 19:58  
Sample Name : COCAINE STD  
Submitted by : ASD  
Vial Number : 27  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

Search Libraries: C:\Database\SLI.L Minimum Quality: 80  
C:\Database\NIST08.L Minimum Quality: 80  
C:\Database\PMW\_TOX2.L

| PK# | RT   | Library/ID                   | CAS#        | Qual |
|-----|------|------------------------------|-------------|------|
| 1   | 4.14 | C:\Database\SLI.L<br>COCAINE | 000050-36-2 | 99   |



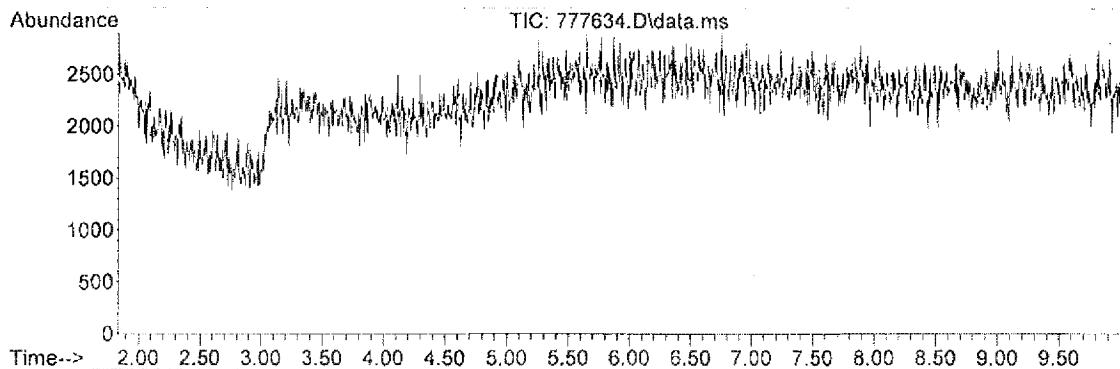
Area Percent / Library Search Report

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Operator : ASD  
Date Acquired : 19 Mar 2011 21:30  
Sample Name : BLANK  
Submitted by : ASD  
Vial Number : 1  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

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| Ret. Time | Area | Area % | Ratio % |
|-----------|------|--------|---------|
|-----------|------|--------|---------|

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\*\*\*NO INTEGRATED PEAKS\*\*\*

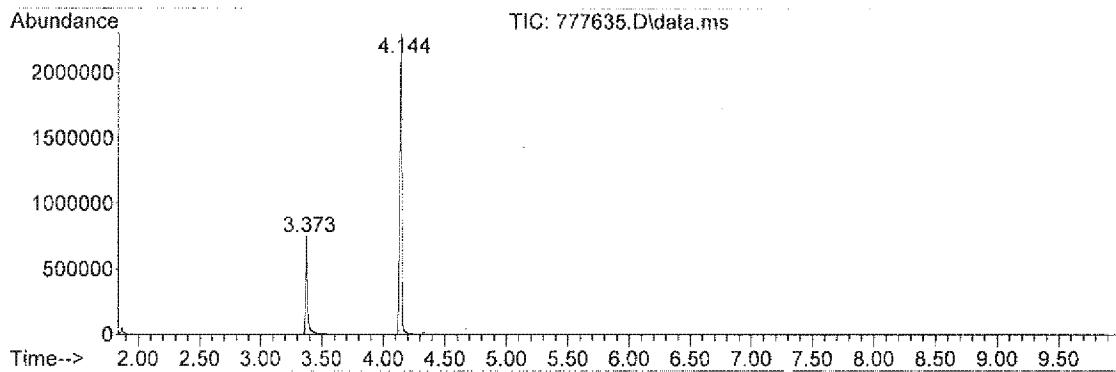
Area Percent / Library Search Report

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Operator : ASD  
Date Acquired : 19 Mar 2011 21:43  
Sample Name : XXXXXXXXXX  
Submitted by : ASD  
Vial Number : 35  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

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| Ret. Time | Area    | Area % | Ratio % |
|-----------|---------|--------|---------|
| 3.373     | 826296  | 24.06  | 31.67   |
| 4.144     | 2608677 | 75.94  | 100.00  |

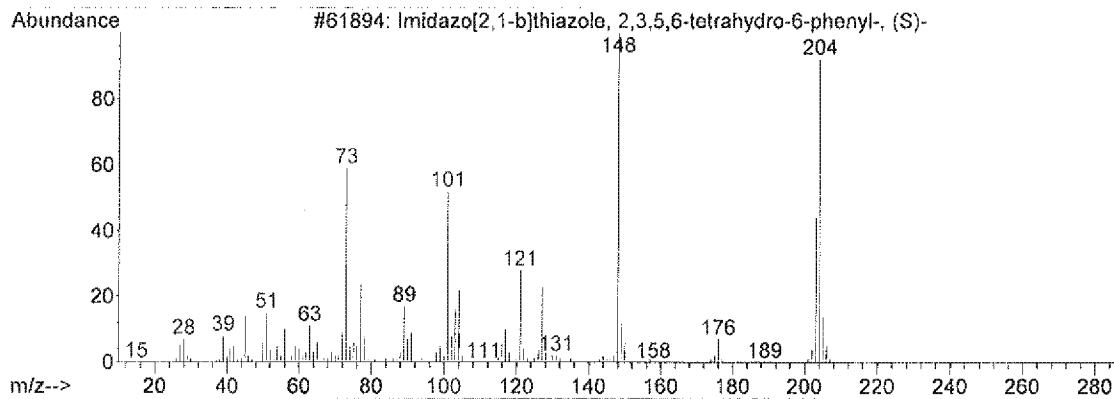
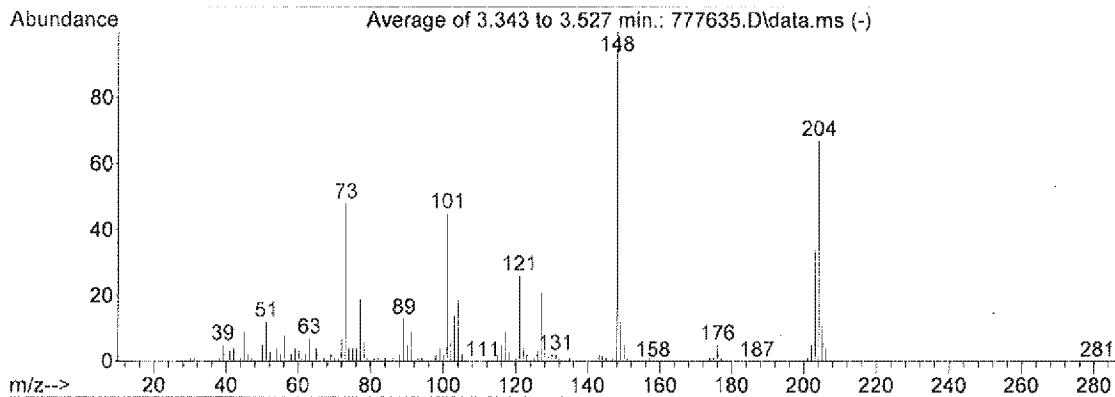
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## Information from Data File:

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Date Acquired : 19 Mar 2011 21:43  
Sample Name : XXXXXXXXXX  
Submitted by : ASD  
Vial Number : 35  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

Search Libraries: C:\Database\SLI.L Minimum Quality: 80  
C:\Database\NIST08.L Minimum Quality: 80  
C:\Database\PMW\_TOX2.L

| PK# | RT   | Library/ID                          | CAS#        | Qual |
|-----|------|-------------------------------------|-------------|------|
| 1   | 3.37 | C:\Database\NIST08.L                |             |      |
|     |      | Imidazo[2,1-b]thiazole, 2,3,5,6-tet | 014769-73-4 | 99   |
|     |      | Levamisole                          | 006649-23-6 | 99   |
|     |      | Levamisole                          | 006649-23-6 | 99   |

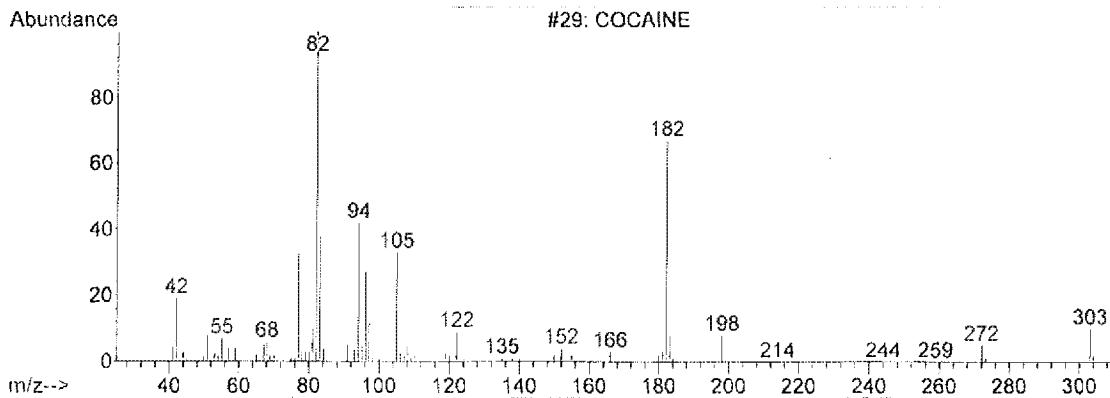
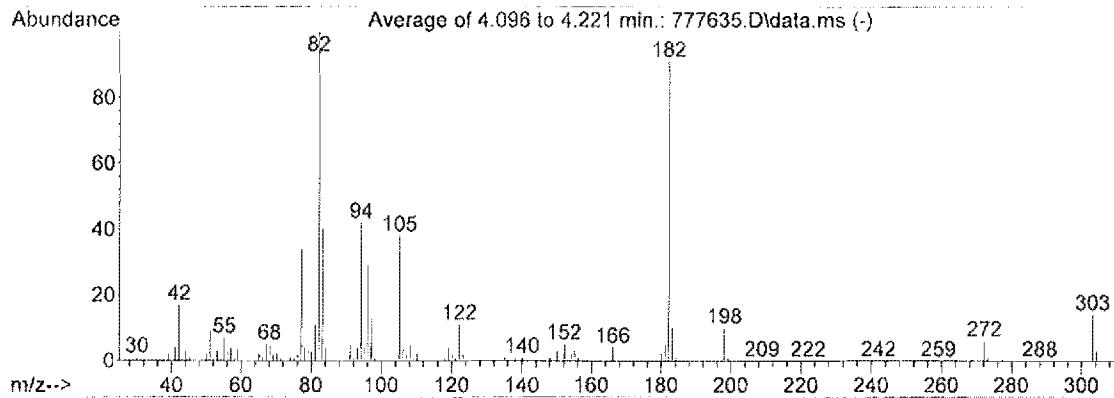


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Submitted by : ASD  
Vial Number : 35  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

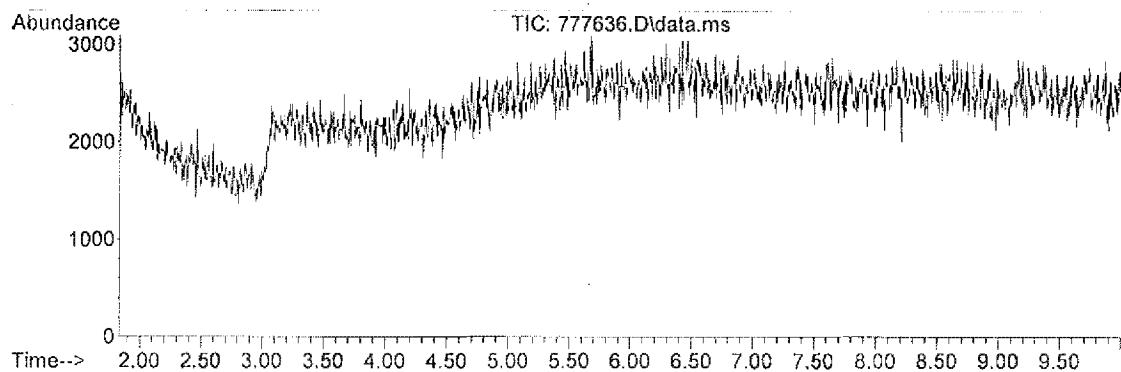
Search Libraries: C:\Database\SLI.L Minimum Quality: 80  
C:\Database\NIST08.L Minimum Quality: 80  
C:\Database\PMW\_TOX2.L

| PK# | RT   | Library/ID                   | CAS#        | Qual |
|-----|------|------------------------------|-------------|------|
| 2   | 4.14 | C:\Database\SLI.L<br>COCAINE | 000050-36-2 | 99   |



## Information from Data File:

File Name : C:\msdchem\1\data\SYSTEM6\03\_19\_11\777636.D  
Operator : ASD  
Date Acquired : 19 Mar 2011 21:56  
Sample Name : BLANK  
Submitted by : ASD  
Vial Number : 1  
AcquisitionMeth: DRUGS.M  
Integrator : RTE



| Ret. Time | Area | Area % | Ratio % |
|-----------|------|--------|---------|
|-----------|------|--------|---------|

\*\*\*NO INTEGRATED PEAKS\*\*\*

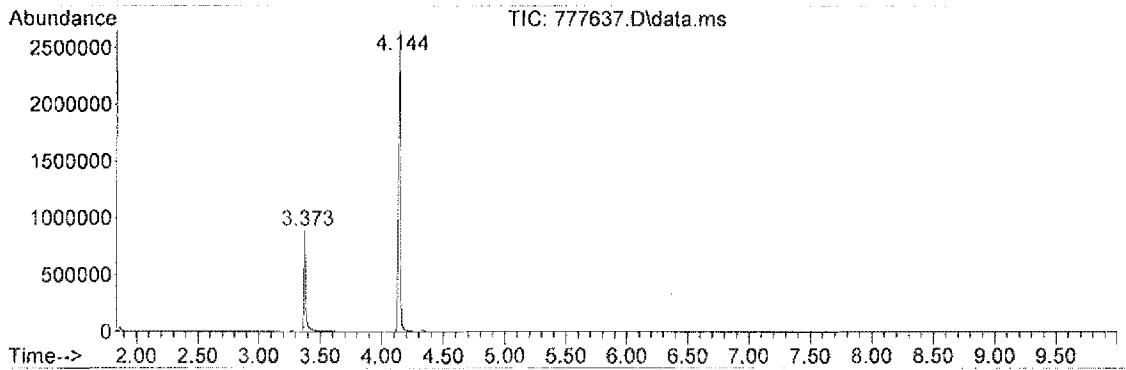
Area Percent / Library Search Report

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Operator : ASD  
Date Acquired : 19 Mar 2011 22:09  
Sample Name : XXXXXXXXXX  
Submitted by : ASD  
Vial Number : 37  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

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| Ret. Time | Area    | Area % | Ratio % |
|-----------|---------|--------|---------|
| 3.373     | 960860  | 23.82  | 31.26   |
| 4.144     | 3073489 | 76.18  | 100.00  |

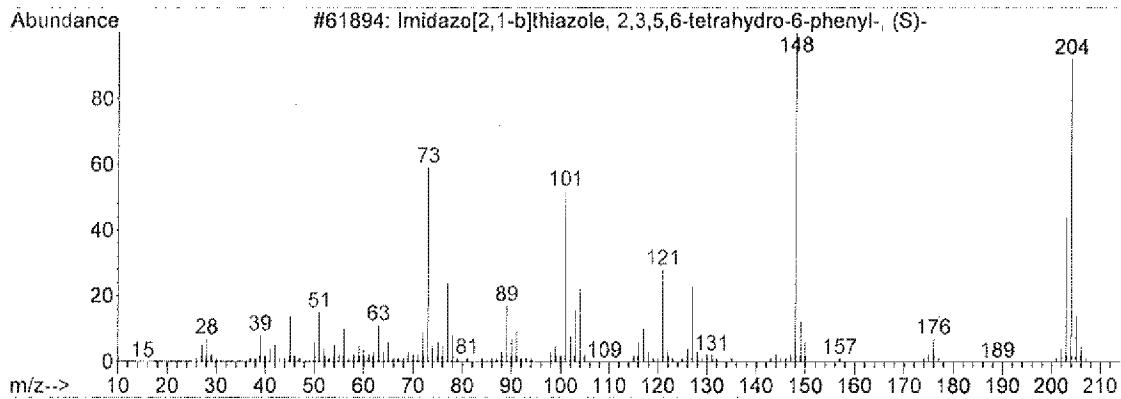
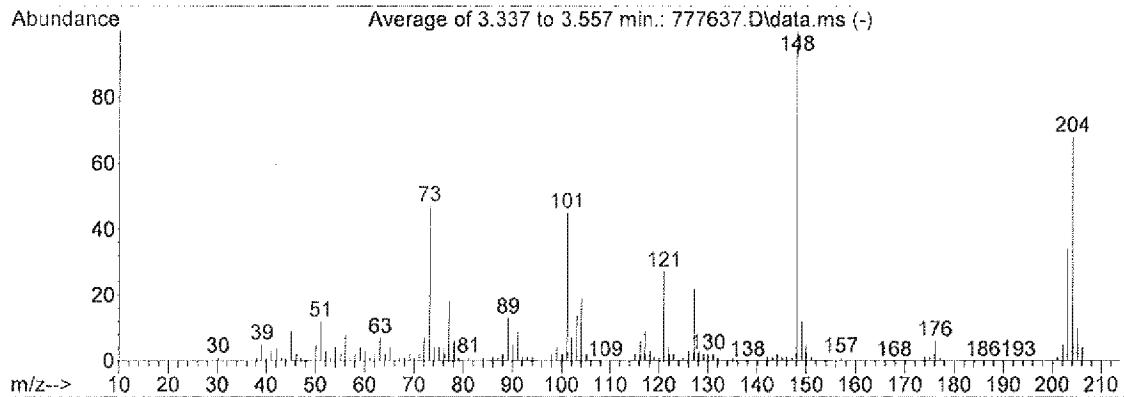
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Date Acquired : 19 Mar 2011 22:09  
Sample Name : XXXXXXXXXX  
Submitted by : ASD  
Vial Number : 37  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

Search Libraries: C:\Database\SLI.L Minimum Quality: 80  
C:\Database\NIST08.L Minimum Quality: 80  
C:\Database\PMW\_TOX2.L

| PK# | RT   | Library/ID                          | CAS#        | Qual |
|-----|------|-------------------------------------|-------------|------|
| 1   | 3.37 | C:\Database\NIST08.L                |             |      |
|     |      | Imidazo[2,1-b]thiazole, 2,3,5,6-tet | 014769-73-4 | 99   |
|     |      | Levamisole                          | 006649-23-6 | 99   |
|     |      | Levamisole                          | 006649-23-6 | 98   |



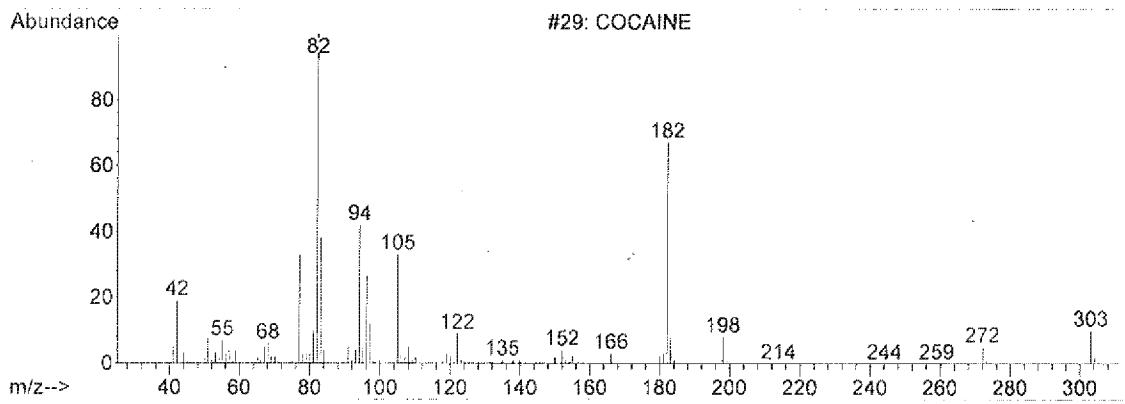
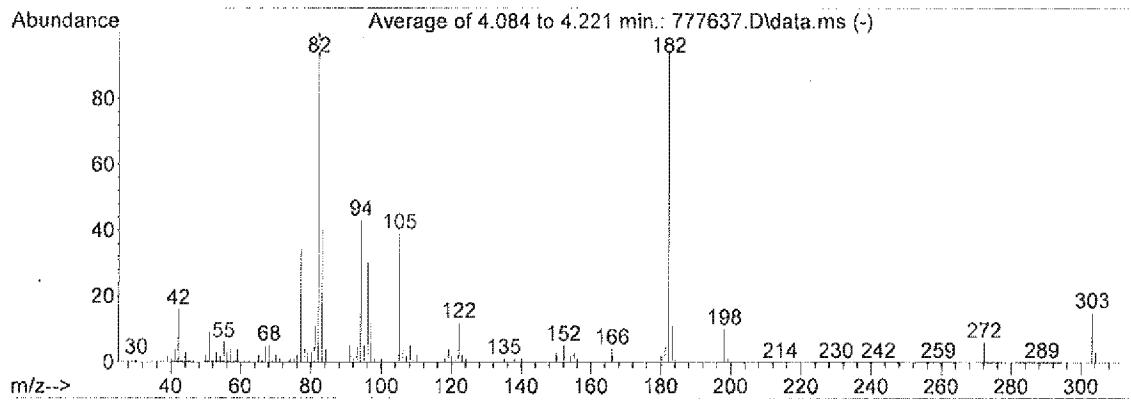
## Area Percent / Library Search Report

## Information from Data File:

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Sample Name : XXXXXXXXXX  
Submitted by : ASD  
Vial Number : 37  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

Search Libraries: C:\Database\SLI.L Minimum Quality: 80  
C:\Database\NIST08.L Minimum Quality: 80  
C:\Database\PMW\_TOX2.L

| PK# | RT   | Library/ID                   | CAS#        | Qual |
|-----|------|------------------------------|-------------|------|
| 2   | 4.14 | C:\Database\SLI.L<br>COCAINE | 000050-36-2 | 99   |



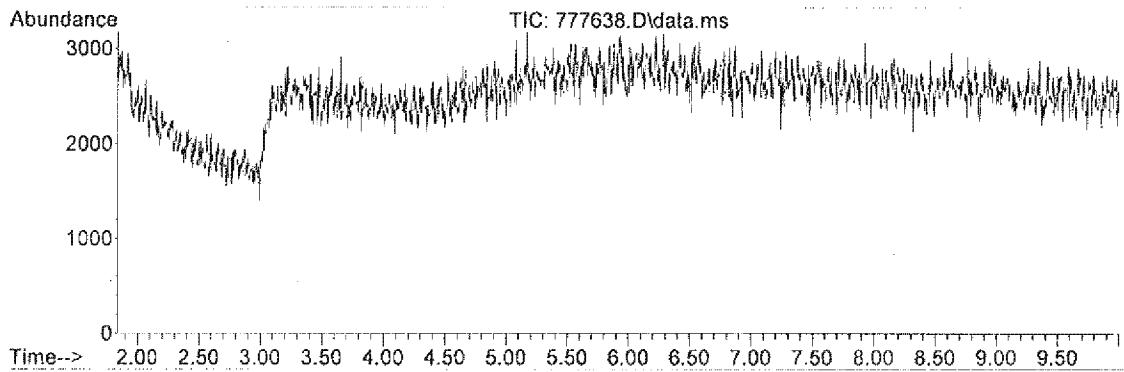
Area Percent / Library Search Report

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Date Acquired : 19 Mar 2011 22:23  
Sample Name : BLANK  
Submitted by : ASD  
Vial Number : 1  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

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| Ret. Time | Area | Area % | Ratio % |
|-----------|------|--------|---------|
|-----------|------|--------|---------|

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\*\*\*NO INTEGRATED PEAKS\*\*\*

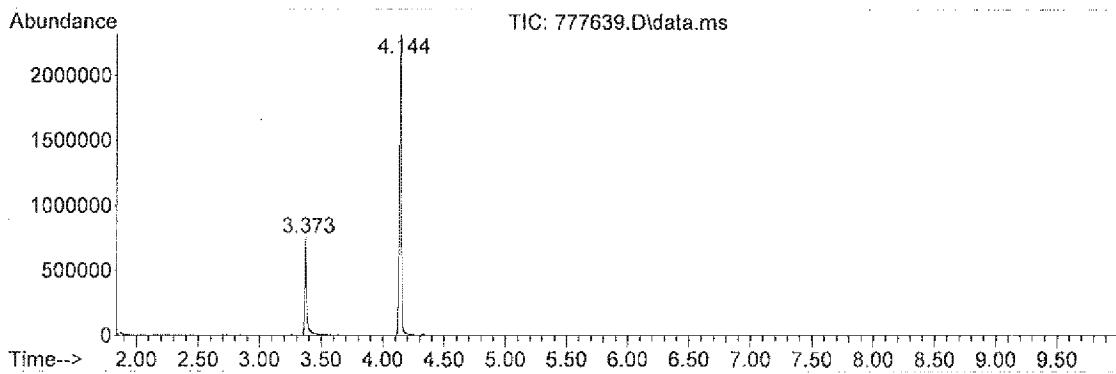
Area Percent / Library Search Report

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Information from Data File:

File Name : C:\msdchem\1\data\SYSTEM6\03\_19\_11\777639.D  
Operator : ASD  
Date Acquired : 19 Mar 2011 22:36  
Sample Name : XXXXXXXXXX  
Submitted by : ASD  
Vial Number : 39  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

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| Ret. Time | Area    | Area % | Ratio % |
|-----------|---------|--------|---------|
| 3.373     | 841511  | 24.23  | 31.98   |
| 4.144     | 2631664 | 75.77  | 100.00  |

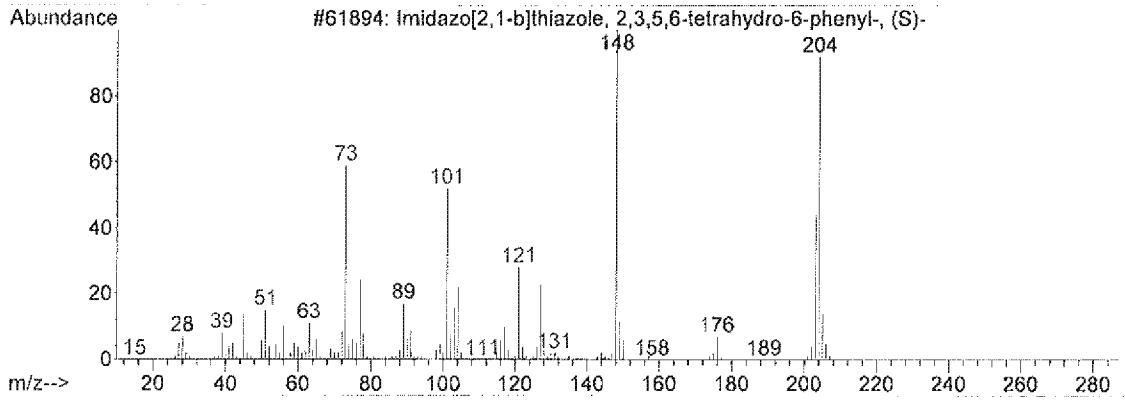
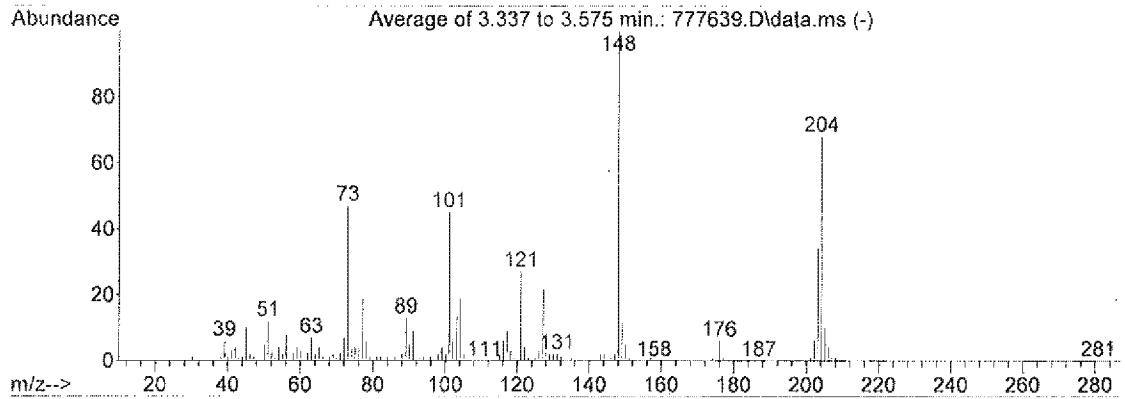
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## Information from Data File:

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Operator : ASD  
Date Acquired : 19 Mar 2011 22:36  
Sample Name : XXXXXXXXXX  
Submitted by : ASD  
Vial Number : 39  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

Search Libraries: C:\Database\SLI.L Minimum Quality: 80  
C:\Database\NIST08.L Minimum Quality: 80  
C:\Database\PMW\_TOX2.L

| PK# | RT   | Library/ID                          | CAS#        | Qual |
|-----|------|-------------------------------------|-------------|------|
| 1   | 3.37 | C:\Database\NIST08.L                |             |      |
|     |      | Imidazo[2,1-b]thiazole, 2,3,5,6-tet | 014769-73-4 | 99   |
|     |      | Levamisole                          | 006649-23-6 | 99   |
|     |      | Levamisole                          | 006649-23-6 | 98   |

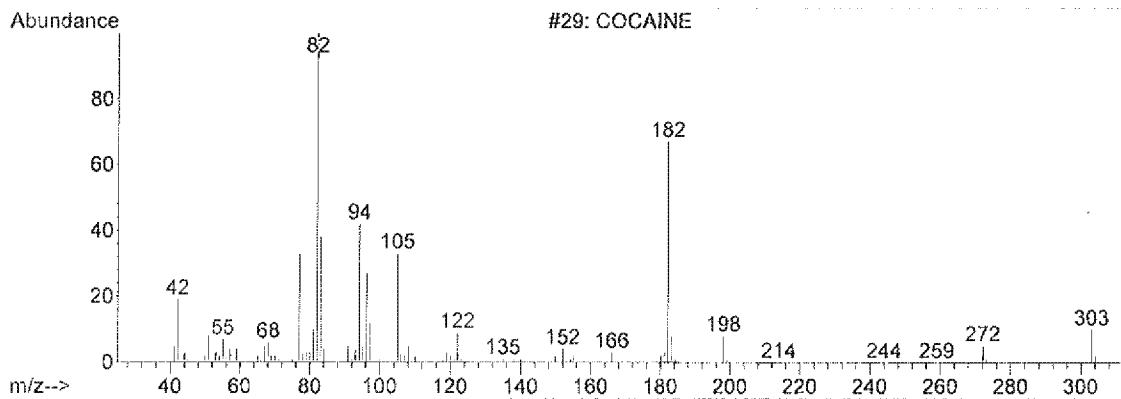
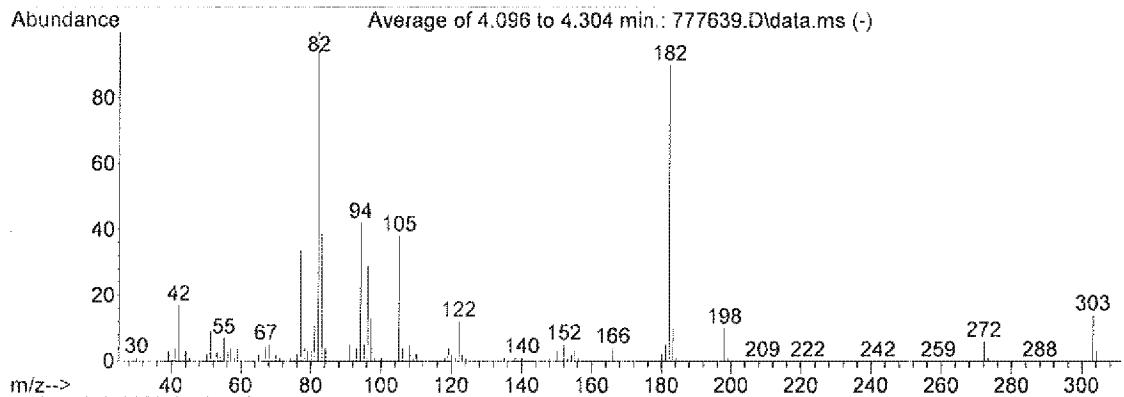


## Information from Data File:

File Name : C:\msdchem\1\data\SYSTEM6\03\_19\_11\777639.D  
Operator : ASD  
Date Acquired : 19 Mar 2011 22:36  
Sample Name : XXXXXXXXXX  
Submitted by : ASD  
Vial Number : 39  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

Search Libraries: C:\Database\SLI.L Minimum Quality: 80  
C:\Database\NIST08.L Minimum Quality: 80  
C:\Database\PMW\_TOX2.L

| PK# | RT   | Library/ID                   | CAS#        | Qual |
|-----|------|------------------------------|-------------|------|
| 2   | 4.14 | C:\Database\SLI.L<br>COCAINE | 000050-36-2 | 99   |



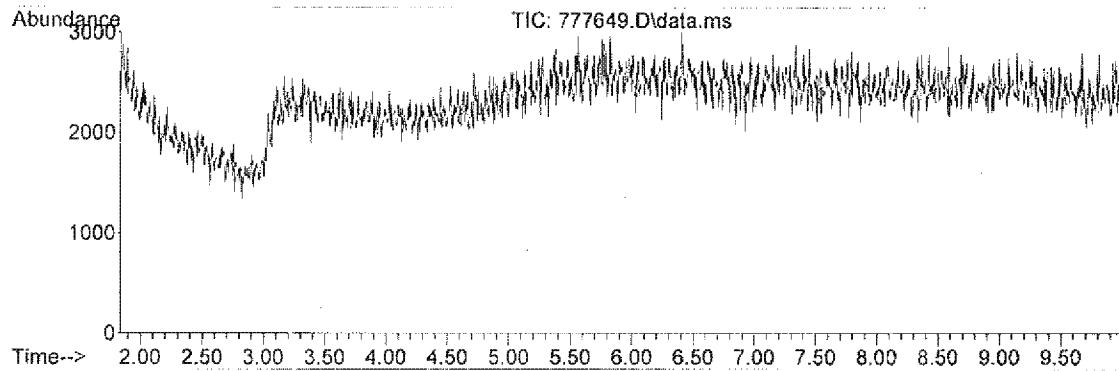
Area Percent / Library Search Report

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Operator : ASD  
Date Acquired : 20 Mar 2011 00:47  
Sample Name : BLANK  
Submitted by : ASD  
Vial Number : 1  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

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| Ret. Time | Area | Area % | Ratio % |
|-----------|------|--------|---------|
|-----------|------|--------|---------|

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\*\*\*NO INTEGRATED PEAKS\*\*\*

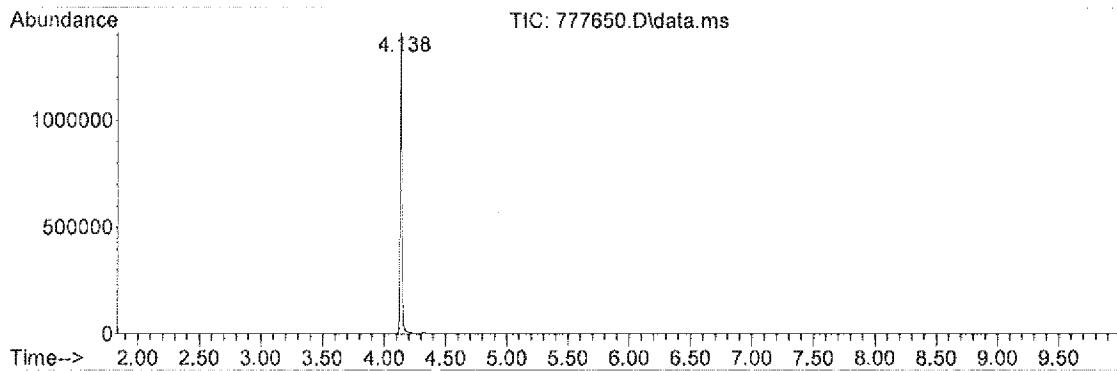
Area Percent / Library Search Report

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Information from Data File:

File Name : C:\msdchem\1\data\SYSTEM6\03\_19\_11\777650.D  
Operator : ASD  
Date Acquired : 20 Mar 2011 1:00  
Sample Name : COCAINE STD  
Submitted by : ASD  
Vial Number : 27  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

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| Ret. Time | Area    | Area % | Ratio % |
|-----------|---------|--------|---------|
| 4.138     | 1360768 | 100.00 | 100.00  |

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## Information from Data File:

File Name : C:\msdchem\1\data\SYSTEM6\03\_19\_11\777650.D  
Operator : ASD  
Date Acquired : 20 Mar 2011 1:00  
Sample Name : COCAINE STD.  
Submitted by : ASD  
Vial Number : 27  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

Search Libraries: C:\Database\SLI.L Minimum Quality: 80  
C:\Database\NIST08.L Minimum Quality: 80  
C:\Database\PMW\_TOX2.L

| PK# | RT   | Library/ID                   | CAS#        | Qual |
|-----|------|------------------------------|-------------|------|
| 1   | 4.14 | C:\Database\SLI.L<br>COCAINE | 000050-36-2 | 99   |

